Charlotte, NC
Raleigh, NC
Columbia, SC
Winston-Salem, NC
Asheville, NC
Knoxville, TN
Greenville, SC
Chattanooga, TN
Nashville, TN

SPATCO environmental services

July 25, 1989

Yoco, Inc.
P. O. Box 78
White Plains, North Carolina 27031

Re: Laboratory Analysis Results for Tank Closure
Soil Samples
Neighbors No. 3
Hwy. 601
Mt. Airy, NC

Dear Mr. Atkins:

Enclosed are the laboratory analyses for two (2) soil samples obtained on July 10, 1989 at the location referenced above. The samples were collected from the excavation that resulted from the removal of one (1) 4,000 gallon [Kerosene] tank. The excavated tank appeared to be in good condition; however, a slight kerosene odor was present in the excavation.

Two (2) hand auger borings were advanced into the native soil below the floor of the tank excavation. These borings were located at opposite ends of the tank excavation (see enclosed site sketch). The hand auger used to collect the soil samples was thoroughly decontaminated prior to and between collection of each individual soil sample. Each sample was split into duplicates, one half evaluated with an organic vapor analyzer (OVA) for possible hydrocarbon contamination and the other half placed in a new, clean glass jar for laboratory analysis. The soil samples collected for laboratory analysis were immediately placed in a chilled cooler, refrigerated while stored at SPATCO Environmental offices, and shipped in a chilled cooler to the subcontract laboratory. A copy of the chain of custody record is enclosed to verify that the samples arrived at the laboratory intact, and at proper temperature. The soil samples were analyzed for Total Petroleum Hydrocarbons (TPH) - Mid-Boiling Range and Benzene, Toluene, Ethylbenzene and Total Xylene (BTEX).

Sample #	Depth Collected	OVA Reading	TPH Mid-Boiling	Benzene	Toluene	Ethyl-Benzene	Total Xylene
HB-1-8.5	8.5 ft.	0 ppm	ND*	ND*	ND*	ND*	ND*
HB-2-9.0	9.0 ft.	2 ppm	ND*	ND*	ND*	ND*	ND*

* ND - No detection at a specific detection level.

The laboratory results indicate that, if hydrocarbon contamination is present, it is present in concentrations below the level the laboratory can detect.

As no significant hydrocarbon contamination in the soil samples was detected, no further investigation or action is required (Federal Regulation 40 CFR 280.52(b)). However, it would be in your best interest to report these findings to the N. C. Division of Environmental Management.

If you have any questions, please contact me.

Sincerely,
SPATCO Environmental

Alex McGilvary
Staff Geologist

AMc;jh

cc: Ms. Jessie Davis

SURRY COUNTY, N. C.

APPLICATION/PERMIT FOR CONSTRUCTION OR OTHER WORK

TELEPHONE: 919/374-5071 OR 919/366-2886

DATE: 07/10/89

PERMIT NO. 4486

TOWNSHIP	FRINGE	TN LMTS	ZONING	ZONE 2	OTHER	WATER	SEWER
MT. AIRY	N		G-B				

LAND AREA: CERT. #: TYPE: TI

PROPERTY OWNER
NEIGHBORS INC.
PO BOX 48
MT. AIRY, NC 27030

DESCRIPTION
HWY 601 AT NEIGHBORS STORE

PHONE: TOTAL CONSTRUCTION COST: 0.00

CONTRACTOR INFORMATION

TYPE	LIC. #	CONTRACTOR	ADDRESS
MECH	OWNER	NEIGHBORS INC.	PO BOX 48 MT. AIRY, NC 27030

BILLING INFORMATION

P: 0.00 E: 0.00 H: 0.00 A: 0.00 I: 0.00 B: 0.00 O: 25.00

TOTAL FEE: 25.00 BILL TO: NEIGHBORS INC.

The undersigned does hereby declare that the information given above is correct and agrees to comply with all state and local laws, local ordinances and regulations, the N.C. State Building Code, and any restrictions as shown below. The applicant furthermore declares that he/she is the property owner ~~or he/she~~ does truly represent the property owner.

APPLICANT'S SIGNATURE _____ DATE: _____

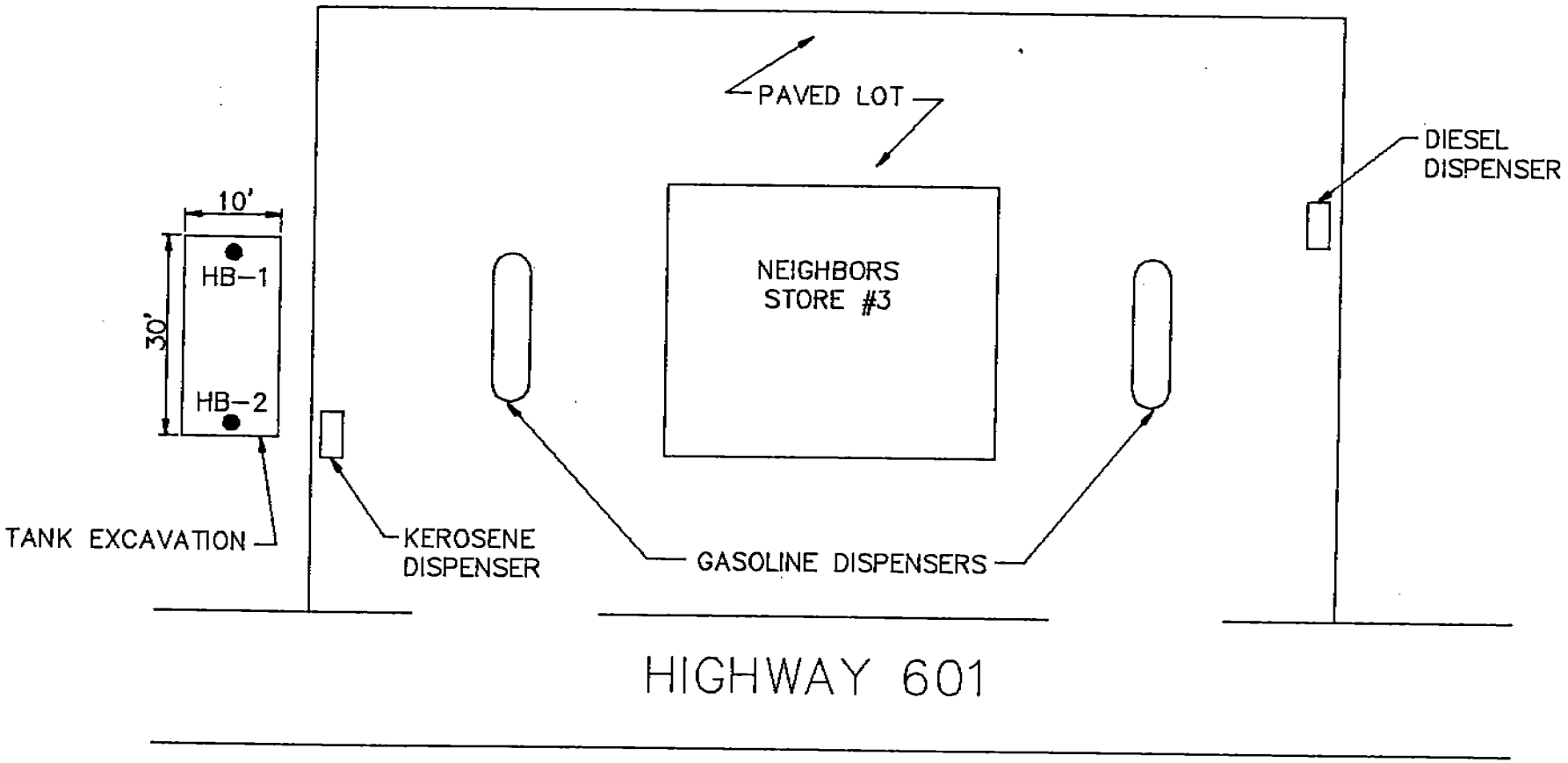
APPROVAL BY _____ DATE: 7-10-89

Checked w/ Lab — modified method used is OK for kerosene

EFG 9/21/89

fcd 07-10-89 BE

TANK EXCAVATION AND HAND AUGER SAMPLING POINTS



• SAMPLING POINT

YOCO INC.STORE #063
NEIGHBORS #3
HWY 601
MT. AIRY, NC
WO #43556

NOT TO SCALE

SPATCO environmental
556 L ARBOR HILL ROAD
KERNERSVILLE, NORTH CAROLINA 27284
PHONE 919/996-0573
SOUTHERN PUMP & TANK COMPANY

Chain of Custody Record

PROJECT: YOCO INC., STORE #063

SITE: NEIGHBORS #3, HWY 601, MT AIRY, NC

COLLECTED BY (Signature): Martin A. McGilvary

FIELD SAMPLE I.D.	SAMPLE MATRIX	DATE/TIME	NO. OF CONTAINERS	TPH (mid-boiling)	BTEX						REMARKS	SAM ID NO. (for lab use only)
HB-1-8.5	Soil	7-10-89/1110hrs	1	X	X							
HB-2-9.0	Soil	7-10-89/1117hrs	1	X	X							

ANALYSES

REMARKS

RELINQUISHED BY:	DATE	TIME
Martin A. McGilvary	7/11/89	1300 hrs

RECEIVED BY:	DATE	TIME	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	DATE	TIME	RELINQUISHED BY:	DATE	TIME

LAB USE ONLY

RECEIVED FOR LABORATORY BY:	DATE	TIME	AIRBILL NO.	OPENED BY:	DATE	TIME	TEMP°C	SEAL #	CONDITION
Janet D. Kolesar	7/12/89	0900	22085024	Janet D. Kolesar	7/12/89	0900	6°C	NONE	INTACT

REMARKS:

RADIAN CORPORATION

RAS Sacramento REPORT

Work Order # S9-07-075

Received: 07/12/89

07/19/89 05:34:22

REPORT TO
SPATCO
Environmental Division
536-L Arbor Hill Rd.
Kernersville, NC 27284
ATTEN Alex McGilvary

CLIENT SPATCO ENVIR SAMPLES 3
COMPANY SPATCO
FACILITY Environmental Division
(919) 996-0573

WORK ID Yoco Inc., Store #063
TAKEN 07/10/89
TRANS Fedex: 2208507206
TYPE Soil
P.O. # 5419102/W.O. #43556
INVOICE under separate cover

PREPARED BY
Radian Analytical Services
10395 Old Placerville Road
Sacramento,
California 95827
ATTEN
PHONE 916-362-5332

Paul M. Hobbs
CERTIFIED BY

CONTACT LMDAY

SAMPLE IDENTIFICATION

01 HB-1-8.5 SOIL
02 HB-2-9.0 SOIL
03 REAGENT BLANK SOIL

TEST CODES and NAMES used on this report

EX TPH	Extraction for TPH by SP
TPH S	TPH by GC - mod. SW8015

RADIAN CORPORATION

RAS Sacramento REPORT Work Order # S9-07-075
Received: 07/12/89
Results By Test

TEST CODE default units	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)
EX_TPH Date Completed	07/12/89 DATE COMPLETED	07/12/89 DATE COMPLETED	07/12/89 DATE COMPLETED

SAMPLE Sample Id	Test: EX TPH Date Completed
01	07/12/89
HB-1-8.5 SOIL	DATE COMPLETED
02	07/12/89
HB-2-9.0 SOIL	DATE COMPLETED
03	07/12/89
REAGENT BLANK S	DATE COMPLETED

RADIAN CORPORATION

SAMPLE ID HB-1-8.5 SOIL SAMPLE # 01 FRACTIONS: A
Date & Time Collected 07/10/89 Category

EX_TPH 07/12/89
DATE COMPLETED

RADIAN CORPORATION

Received: 07/12/89

RAS Sacramento REPORT
Results by Sample

Work Order # S9-07-075

SAMPLE ID HB-1-8.5 SOIL FRACTION 01A TEST CODE TPH S NAME TPH by GC - mod. sw8015
Date & Time Collected 07/10/89 Category

SOIL TOTAL PETROLEUM HYDROCARBONS - CALIFORNIA LUFT (1) VERIFIED JD

ANALYST MC
INSTRMT A
FILE # A1907144
INJECTED 07/14/89
UNITS ug/Kg

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
71-43-2	Benzene(2)	ND	0.30	1
108-88-3	Toluene(2)	ND	0.30	1
100-41-4	Ethylbenzene(2)	ND	0.30	1
1330-20-7	Total Xylenes(2)	ND	0.50	1
	TPH Gasoline(2)	NA	50	1
	TPH Mid-Boiling(3)	ND	5000	100
106-93-4	1,2-Dibromoethane	NA	5.0	1

(1) See Appendix A for Glossary of Report and Data Flag Definitions
(2) EPA 5030 (purge & trap) followed by GC analysis with PID/FID detectors.
(3) Extraction using EPA 3520 (sonication) followed by GC analysis with FID detector.

RADIAN CORPORATION

SAMPLE ID HB-2-9.0 SOIL SAMPLE # 02 FRACTIONS: A
Date & Time Collected 07/10/89 Category

EX_TPH 07/12/89
DATE COMPLETED

RADIAN CORPORATION

Page 7 RAS Sacramento REPORT Work Order # S9-07-075
Received: 07/12/89 Results by Sample

SAMPLE ID HW-2-9.0 SOIL FRACTION 02A TEST CODE TPH S NAME TPH by GC - mod. SW8015
Date & Time Collected 07/10/89 Category

SOIL TOTAL PETROLEUM HYDROCARBONS - CALIFORNIA LUFT (1) VERIFIED JD

ANALYST MC FILE # A1907145
INSTRMT A INJECTED 07/14/89 UNITS ug/Kg

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
71-43-2	Benzene(2)	ND	0.30	1
108-88-3	Toluene(2)	ND	0.30	1
100-41-4	Ethylbenzene(2)	ND	0.30	1
1330-20-7	Total Xylenes(2)	ND	0.50	1
	TPH Gasoline(2)	NA	50	1
	TPH Mid-Boiling(3)	ND	5000	100
106-93-4	1,2-Dibromoethane	NA	5.0	1

(1) See Appendix A for Glossary of Report and Data Flag Definitions
(2) EPA 5030 (purge & trap) followed by GC analysis with PID/FID detectors.
(3) Extraction using EPA 3520 (sonication) followed by GC analysis with FID detector.

SAMPLE ID REAGENT BLANK SOIL SAMPLE # 03 FRACTIONS: A
Date & Time Collected not specified Category

EX_TPH 07/12/89
DATE COMPLETED

RADIAN CORPORATION

RAS Sacramento REPORT Work Order # S9-07-075
Received: 07/12/89
Results by Sample

SAMPLE ID REAGENT BLANK SOIL FRACTION 03A TEST CODE TPH S NAME TPH by GC - mod. sw8015
Date & Time Collected not specified Category

SOIL TOTAL PETROLEUM HYDROCARBONS - CALIFORNIA LUFT (1) VERIFIED JD

ANALYST MC
INSTRMT A
FILE # A1907141
INJECTED 07/14/89
UNITS ug/Kg

CAS#	COMPOUND	RESULT	DET LIMIT	FACTOR
71-43-2	Benzene(2)	ND	0.30	1
108-88-3	Toluene(2)	ND	0.30	1
100-41-4	Ethylbenzene(2)	ND	0.30	1
1330-20-7	Total Xylenes(2)	ND	0.50	1
	TPH Gasoline(2)	NA	50	1
	TPH Mid-Boiling(3)	ND	5000	100
106-93-4	1,2-Dibromoethane	ND	5.0	1

(1) See Appendix A for Glossary of Report and Data Flag Definitions
(2) EPA 5030 (purge & trap) followed by GC analysis with PID/FID detectors.
(3) Extraction using EPA 3520 (sonication) followed by GC analysis with FID detector.

Appendix A

Comments, Notes and Definitions

Notes and Definitions

Radian Work Order: S9-07-075

*	Est. result less than 5 times detection limit
A	Analytical and/or post-digestion spike
B	Detected in blank, result not corrected
C	Confirmed on second column
D	Sample diluted for this analyte
E	Estimated result - see report narrative
G	Exceeds calibration range
J	Detected at less than detection limit
NA	Not analyzed
NC	Not calculated
ND	Not detected at specified detection limit
NR	Analyte not requested
NS	Not spiked
N\A	Not available
P	Previously confirmed
Q	Outside control limits
R	Detected in blank, result corrected
S	Determined by Method of Standard Addition
U	Unconfirmed-2nd column not requested
X	Not confirmed by analysis on 2nd column

Radian Work Order: S9-07-075

*

The asterisk(*) is used to flag results which are less than five times the method specified detection limit. Studies have shown that the uncertainty of the analysis will increase exponentially as the method detection limit is approached. These results should be considered approximate.

A This flag indicates that a spike is an analytical and/or post-digestion spike. These spikes have not been subjected to the extraction or digestion step.

B This flag indicates that the analyte was detected in the reagent blank but the sample results are not corrected for the amount in the blank.

C Most methods of analysis by gas chromatography recommend reanalysis on a second column of dissimilar phase to resolve compounds of interest from interferences that may occur and for analyte confirmation. The C flag indicates that the analyte has been confirmed by analysis on a second column.

D This flag identifies all analytes identified in analysis at a secondary dilution factor. In an analysis some compounds can exceed the calibration range of the instrument. Therefore two analyses are performed, one at the concentration of the majority of the analytes, and a second with the sample diluted so that high concentration analyte(s) fall within the calibration range.

Radian Work Order: 59-07-075

E

The reported value is estimated because of the presence of interference. The potential source of the interference is included in the report narrative.

G This flag identifies a GC/MS result whose concentration exceeds the calibration range for that specific analysis. Usually if one or more compounds have a response greater than full scale, the sample or extract is diluted and re-analyzed.

J Indicates an estimated value for GC/MS data. This flag is used either when estimating a concentration for tentatively identified compounds where a response factor of 1 is assumed, or when the mass spectral data indicate the presence of a compound that meets the identification criteria but the result is less than the sample quantitation limit.

NA This analyte was not analyzed.

NC Applies to RPD and spike recovery results. The relative percent difference (RPD) and spike recovery are not calculated when a result value is less than five times the detection limit or obvious matrix interferences are present. See * definition for further explanation of the unreliability of data near the detection limit. A spike recovery is not calculated when the sample result is greater than four times the spike added concentration because the spike added concentration is considered insignificant.

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ND This flag (or <) is used to denote analytes which are not detected at or above the specified detection limit. The value to the right of the < symbol is the method specified detection limit for the sample.

NR This analyte was not requested by the client.

NS This analyte or surrogate was not added (spiked) to the sample for this analysis.

N\A A result or value is not available for this parameter, usually a detection limit.

P Most methods of analysis by gas chromatography recommend reanalysis on a second column of dissimilar phase to resolve compounds of interest from interferences that may occur and for analyte confirmation. The P flag indicates that the analyte has been confirmed previously. This flag is applicable to analyses of samples arising from a regular sampling program of a specific sample source; for example, a quarterly well monitoring program.

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Q This quality control standard is outside method or laboratory specified control limits. This flag is applied to matrix spike, analytical QC spike, and surrogate recoveries; and to RPD(relative percent difference) values for duplicate analyses and matrix spike/matrix spike duplicate result.

R This flag indicates that the analyte was detected in the reagent blank and the sample results are corrected for the amount in the blank.

S This flag indicates that a specific result from a metals analysis has been obtained using the Method of Standard Addition.

U Most methods of analysis by gas chromatography recommend reanalysis on a second column of dissimilar phase to resolve compounds of interest from interferences that may occur and for analyte confirmation. The U flag indicates that second column was not requested.

X Most methods of analysis by gas chromatography recommend reanalysis on a second column of dissimilar phase to resolve compounds of interest from interferences that may occur and for analyte confirmation. The X flag indicates a second column confirmation was performed but the analyte was not confirmed and is likely a false positive.

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TERMS USED IN THIS REPORT:

Analyte - A chemical for which a sample is to be analyzed. The analysis will meet EPA method and QC specifications.

Compound - See Analyte.

Detection Limit - The method specified detection limit, which is the lower limit of quantitation specified by EPA for a method. Radian staff regularly assess their laboratories' method detection limits to verify that they meet or are lower than those specified by EPA. Detection limits which are higher than method limits are based on experimental values at the 99% confidence level. Note, the detection limit may vary from that specified by EPA based on sample size, dilution or cleanup. (Refer to Factor, below)

EPA Method - The EPA specified method used to perform an analysis. EPA has specified standard methods for analysis of environmental samples. Radian will perform its analyses and accompanying QC tests in conformance with EPA methods unless otherwise specified.

Factor - Default method detection limits are based on analysis of clean water samples. A factor is required to calculate sample specific detection limits based on alternate matrices (soil or water), use of cleanup procedures, or dilution of extracts/ digestates. For example, extraction or digestion of 10 grams of soil in contrast to 1 liter of water will result in a factor of 100.

Matrix - The sample material. Generally, it will be soil, water, air, oil, or solid waste.

Radian Work Order - The unique Radian identification code assigned to the samples reported in the analytical summary.

Units -

ug/L	micrograms per liter (parts per billion); liquids/water
ug/Kg	micrograms per kilogram (parts per billion); soils/solids
ug/M3	micrograms per cubic meter; air samples
mg/L	milligrams per liter (parts per million); liquids/water
mg/Kg	milligrams per kilogram (parts per million); soils/solids
%	percent; usually used for percent recovery of QC standards
uS/cm	conductance unit; microSiemans/centimeter
mL/hr	milliliters per hour; rate of settlement of matter in water
NTU	turbidity unit; nephelometric turbidity unit
CU	color unit; equal to 1 mg/L of chloroplatinate salt